DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: COLCORD POND		Lake Area (ha):	4.86
Town: EXETE	R	Maximum depth (m):	2.1
County: Rocki	ngham	Mean depth (m):	0.7
River Basin: Coast		Volume (m³):	35000
Latitude: 42°59		Relative depth:	0.9
Longitude: 70°58	'21" W	Shore configuration:	2.21
Elevation (ft):	45	Areal water load (m/yr):	
Shore length (m):		Flushing rate (yr^{-1}) :	410.9
Watershed area (ha		P retention coeff.:	0.03
<pre>% watershed ponded</pre>	: 0.2	Lake type: natural	w/dam

BIOLOGICAL:	28 January 1998	3 September 1997
DOM. PHYTOPLANKTON (% TOTAL) #1	SPARSE - NO DOMINANT	MELOSIRA 35%
#2		FILAM. GR. SPP 15%
#3		
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		15.24
DOM. ZOOPLANKTON (% TOTAL) #1	NONE OBSERVED	SPARSE - NO DOMINANT
#2		
#3		
ROTIFERS/LITER		
MICROCRUSTACEA/LITER		14
ZOOPLANKTON ABUNDANCE (#/L)		25
VASCULAR PLANT ABUNDANCE		Abundant
SECCHI DISK TRANSPARENCY (m)		1.7
BOTTOM DISSOLVED OXYGEN (mg/L)	11.5	4.2
BACTERIA (E. coli, #/100 ml) #1		14
#2		76
#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None Hypolimnion volume (m^3) : None Anoxic volume (m^3) : None

CHEMICAL:			COLCORD EXETER	POND	
	28 Janua	ry 1998	3	September	1997
DEPTH (m)	1.5		1.0		
pH (units)	6.3		7.2		
A.N.C. (Alkalinity)	9.1		52.6		
NITRATE NITROGEN	< 0.05		< 0.05		
TOTAL KJELDAHL NITROGEN	0.40		0.90		
TOTAL PHOSPHORUS	0.017		0.078		
CONDUCTIVITY (µmhos/cm)	126.0		156.2	***************************************	
APPARENT COLOR (cpu)	50		100		
MAGNESIUM			2.96		
CALCIUM			11.5		
SODIUM			13.6		
POTASSIUM			2.71		
CHLORIDE	25		23		/ / / / / / / / / / / / / / / / / / / /
SULFATE	9		5		******
TN : TP	24		12		
CALCITE SATURATION INDEX			1.3		

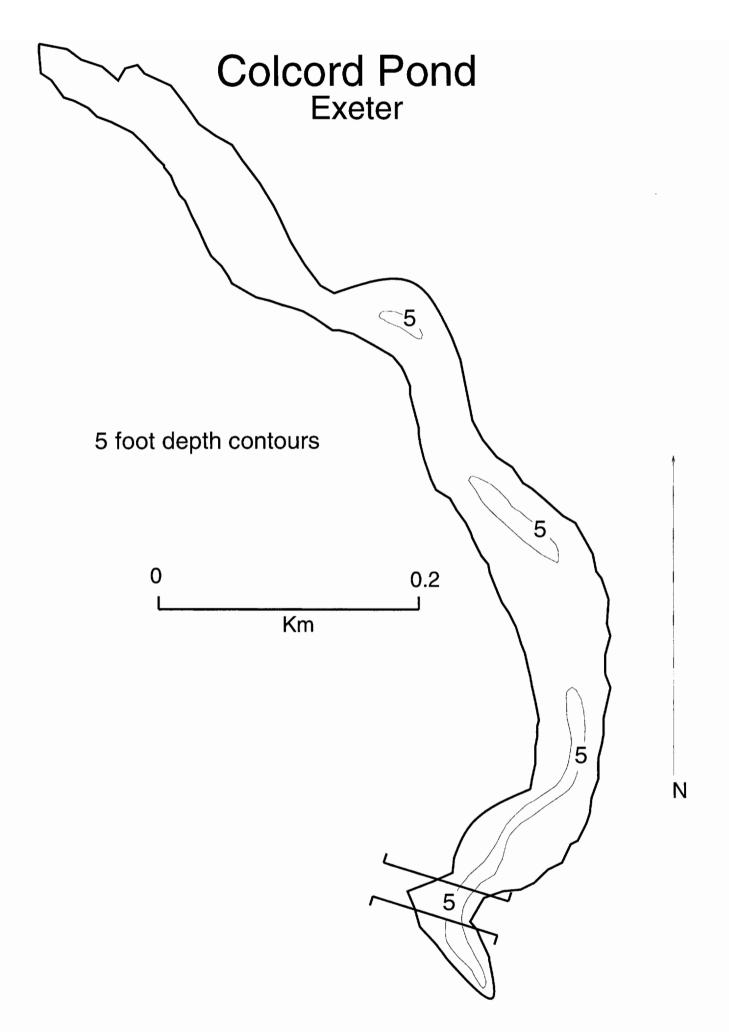
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1997

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	4	5	3	12	Eutro.

COMMENTS:

- 1. This is a shallow impoundment on the Little River, with a relatively large watershed and rapid flushing rate.
- 2. Colcord Pond is a dark tea-colored eutrophic pond with elevated conductivity, ANC, and cation values. Phosphorus and chlorophyll values were high and water clarity poor.
- 3. No boat launch. Boat was put in over the bank near the dam, off Rt. 111A.



FIELD DATA SHEET

LAKE: COLCORD POND

DATE: 09/03/97

TOWN: EXETER

WEATHER: OVERCAST & BREEZY

DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	20.7	6.8	74 %
1.0	20.2	4.2	46 %
		4	
		14/10	
		- total - tota	

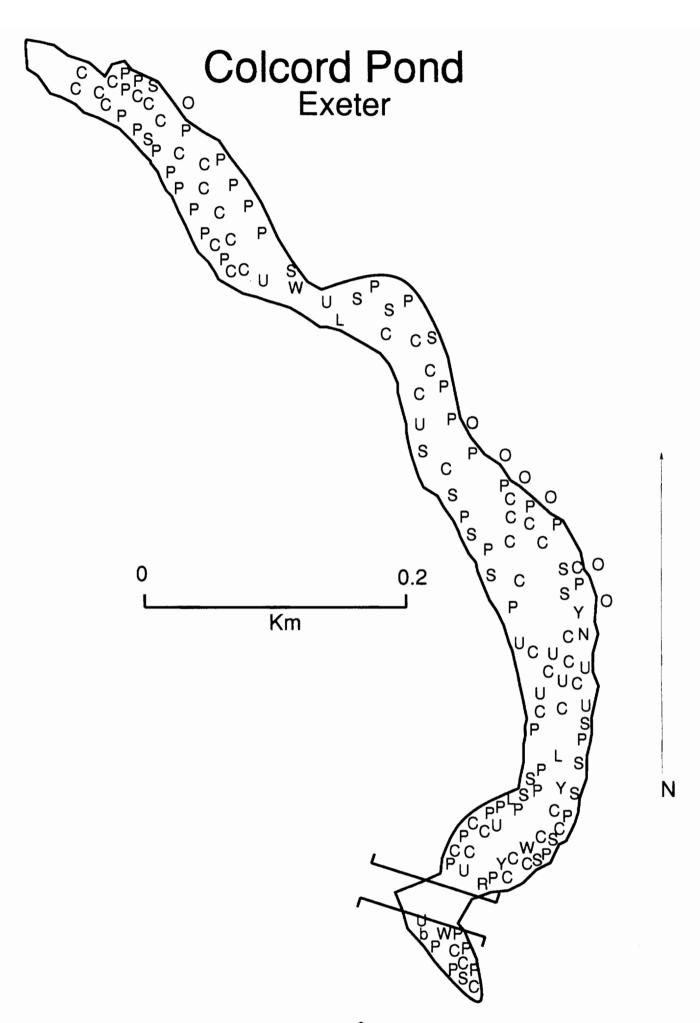
SECCHI DISK (m): 1.7

COMMENTS:

BOTTOM DEPTH (m): 1.8

TIME: 1125

*Dissolved oxygen values are in mg/L



AQUATIC PLANT SURVEY

LAK	E: COLCORD POND	TOWN: EXETER	DATE: 09/03/97	
Key	PLANT	NAME	ABUNDANCE	
ией	GENERIC	COMMON		
С	Ceratophyllum demersum	Coontail	Abundant	
P	Pontederia cordata	Pickerelweed	Common	
S	Sparganium	Bur reed	Scattered	
Ū	Utricularia	Bladderwort	Scattered	
W	Potamogeton	Pondweed	Scattered	
0	Cephalanthus occidentalis	Buttonbush	Scattered	
Y	Nuphar	Yellow water lily	Sparse	
L	Lemnaceae	Duckweed family	Scattered	
R	Lythrum salicaria	Purple loosestrife	Sparse	
b	Scirpus	Bulrush	Sparse	
N	Nymphaea	White water lily	Sparse	

OVERALL ABUNDANCE: Abundant

GENERAL OBSERVATIONS:

- 1. A shallow weedy pond.
- 2. Algal clumps were present near the dam.
- 3. Large snails observed.